

Biological tissue samples: Pieces of autoptic human pineal glands

	ASD	Controls
Females	1	1
Males	6	17

Time of Death (t.o.d)*	ASD	Controls
Day (7am -18pm)	3	9
Night (18pm -7am)	4	8

**One control pineal gland without t.o.d*

Sample preparation for mass spectrometry

Protein extraction and quantification
Proteolytic digestion

Liquid chromatography–tandem mass spectrometry analysis (LC-MS/MS)

Statistical data analysis

Maxquant search
Label free quantification
Imputation of missing values (2000 simulations)
Detection of rhythmic protein abundance
Comparison Day versus Night

Three different methods to extract the modulated genes

Significantly Modulated BGLS Method
Significantly Modulated JTK Method
Significantly Modulated Bootstraps Method
Confident Only Day-Night

Gene Ontology analysis

Protein-Protein Interaction visualization